



## Software Release Notes for nordicBrainEx v2.3.12

Revision 1

Date: February 10th, 2023

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*NOTE: The most current documentation for released products is available on <http://www.nordicneurolab.com>. The online documentation may contain updated information on modifications made and issues reported after this document was issued.*

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### **Introduction**

These release notes accompany version 2.3.12 of nordicBrainEx.

### **New functionality and enhancements**

With the changes in regulations for products, nordicBrainEx will no longer be able to conform to the latest version of the MDR (Medical Device Regulation)- EU, with its current architecture. The new regulations came into effect from May 2021 with the current CE certification on nordicBrainEx expiring in February 2023. Due to this, nordicBrainEx will be removed from sale before the current CE certification expires.

This release is a maintenance upgrade of nordicBrainEx where the labelling requirements for the CE certification are removed.

### **Who should upgrade?**

Users are not required to upgrade.

### **Supplementary Notes**

The software is installed by running the installer **nordicBrainEx\_Setup.exe** available on request.

nordicBrainEx is not compatible and cannot coexist on the same computer with nordicICE of older versions than v2.3.13. The latest clinical version of nordicICE is v2.3.14. If nordicBrainEx is going to coexist with this version on the same computer, it is advisable to install nordicBrainEx last.

nordicBrainEx can coexist with nordicICE v4.0 and newer on the same computer but they cannot interact or share data. In this scenario nordicICE should be installed last.

If you are upgrading from nordicBrainEx 2.2.0 or older versions, a new clean database is automatically installed, due to changes in the database structure. The user is free to import selected or all data from the existing database.

## **Contact**

For questions or problems, please contact support:

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## **Instructions for Use**

Instructions for Use are included in the installation files.

## Known issues and limitations

### ***3D viewer limitation***

There is a limitation in the algorithms controlling the order of interleaved objects in the 3D viewer, causing it to seem like the order of objects change when you change the opacity of fibers/planes from 100% to something a bit lower. To get the most correct visualization the opacity should be kept at 100%.

### ***Database corruptions***

After long time use the database can accumulate minor corruptions that in time can render it slow and in extreme cases unusable. This does not affect the underlying DICOM objects in any way and there is a simple procedure to repair or rebuild the database. Please contact NordicNeuroLab support for assistance.

### ***Important issues that are emphasized.***

BX-44      “Slice all” when viewing “Dynamic series” returns only one image. Workaround: use the manual slicing tool.

BX-66      “Find VOI” does not work properly when in Zoom/Pan mode

BX-226     The following are not saved in a session:

- Datasets set as overlays/underlays, this is not saved.
- Dataset set to “view in 3D”, this is not saved.
- 3D viewer: Orientation is not saved
- 3D viewer: BOLD activations shown in 3D viewer not saved.
- 3D viewer: the orientation or cropping/clipping plane if any fancy editing has been done here is not saved.
- The order of BOLD activations are not saved (appears alphabetically).
- VOI color opacity not saved. Reset to default 30 %
- Fiber group color opacity not saved. Set do the default value
- VOI logical operators, both for DTI and VOI filtering.

BX-34      Synchronize 3D/MPR is not accurate if the voxel-size is not 1x1x1

BX-46      VOI’s that are reduced to a minimum size in one or more directions might lead to a failure to detect what fibers go inside this VOI as you might have crossing fibers that

do not actually go through any of the voxels within the VOI. Workaround: make the VOI slightly larger.

- BX-67 Problems when changing the Gaussian smoothing value using the arrows in the BOLD settings. Close and re-open settings to verify what value is actually set.
- BX-68 Dataset with invalid birth date might fail to load. Invalid birthdate being any birthdate that does not follow the DICOM standard “yyyymmdd”
- BX-48 When loading a session, the motion correction is not loaded, meaning that the motion correction results are not viewable. The output maps are still correct. If you want to re-do any analysis the motion-correction will be performed.
- BX-71 Deleting fiber groups can lead to a mismatch between the selected color of the group, and the color used in the 3D viewer.
- BX-72 Trying to save a BOLD design file with a wrong TR time that causes an error when saving will cause an error to appear every time you try to save this design. Workaround: restart the editing.
- BX-74 Sending session can cause duplicate sessions at receiving side if there were problems during the transfer.
- BX-75 Saving session when an unsaved design was used might cause the wrong settings to be displayed if selecting “Edit settings” after the saving of the session is performed.
- BX-76 Trying to save a session while an analysis is running might cause errors.
- BX-35 Brown fiber groups change color back to red when a VOI is changed or deleted.
- BX-110 If the OS is using Japanese regional settings, a report saved to pdf format cannot be opened.
- BX-29 nordicBrainEx does not support a value different from 1 in the DICOM tag called “Rescale Slope”. If a value different from 1 is used, please interpret images with care.
- BX-40 When a session is sent, the coregistration matrix of a series that already exists on the receiver side will not be updated. The workaround is to first delete the series on the receiver side.
- BX-30 If a VOI is used to select a seed region for fiber tracking there might be small mismatch between the volume actually used for fiber tracking and the volume indicated by the VOI. However, the fibers that are found are correct, and the export to neuronavigational systems is correct. When using seed VOIs we recommend that

the VOI is made slightly bigger than seems necessary to ensure that all interesting fibers are included.

- BX-122 The icon for nordicBrainEx may sometimes disappear from the taskbar in windows 8.1 even though it is still running. Use alt+tab to toggle back to the open nordicBrainEx window.
- BX-63 If the series is removed or window level series is changed during manual window leveling, the initial values that are displayed are not updated for the new window level series. Make a minor adjustment and the values are updated properly.
- BX-94 In certain scenarios the application will appear grey and irresponsive after it has been started. This is most likely due to the database becoming slow over time (see section above). Contact NNL for assistance with repairing the database.
- BX-462 Placing the crosshair too close to the edge of the frame and creating a VOI can trigger the error 'Scan line index out of range'. Create a VOI in the center of the frame and move it to the edge.
- BX-439 DTI series acquired on GE scanners using Phase encoding direction 'COL' cannot automatically extract gradients. Gradients will have to be specified manually.
- BX-410 In rare cases where image slices are not ordered according to 'Instance number', nordicBrainEx may be unable to find proper image geometry.
- BX-405 DICOM images from older Siemens workstations may not have DTI gradients encoded in a way that allows automatic extraction. Make sure that the Siemens workstation is updated to the newest version.
- BX-367 VOIs that are placed at the very edge of the dataset and used as seed for fiber tracking may result in fibers being tracked from the opposite side from the VOI (wraparound). No incorrect fibers are produced. Avoid by tracking from a slightly more medial location.
- BX-357 BOLD paradigms defined in nordicAktiva with an on-block that lasts to the very end of the scan may result in a design file that cannot be imported into nordicBrainEx because of round-off errors. Manually edit the design file or edit the paradigm in nordicAktiva to avoid this issue.
- BX-133 Output maps from nordicBrainEx does not have scaling information that can be read by third-party platforms. I.e. pixel values in output maps from nordicBrainEx must be treated as relative values when interpreted in third-party applications.
- BX-616 The icon for nordicBrainEx may sometimes disappear from the task manager in windows 7 even though it is still running. It appears if the screen is maximized.
- BX-700 nordicBrainEx may not work with AMD graphics adapter.

- BX-764 If display scaling in windows is not 100%, 'Add to report' images might display incorrectly, showing only parts of the frame. Work-around is to set scaling in windows display settings to 100%, or to use alternatives to the report for saving of screen shots (such as 'create snapshot' or 'slice selection'/'slice all').
- BX-89 If windows display settings scaling is set to something else than 100 %, the 3D viewer in 'Create snapshot of MPR' is not displayed correctly. Workaround: Set windows display setting to 100% or create a snapshot of the 3D viewer separately.
- BX-911 If windows display settings scaling is set to something else than 100 %, the message 'Default threshold is 40% of max. Adjust if needed.' displayed during BOLD analysis might not be shown correctly. Workaround: Set windows display setting to 100%.